

USSN 10/738,413

EXHIBIT 2

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## siRNA Target Finder

### Information

This tool employs the early, basic siRNA design guidelines first described by Tuschl and colleagues. In general, Ambion scientists find that ~50% of siRNAs designed using this tool will reduce target gene expression by >50%.

#### How to obtain more effective siRNAs:

Ambion has already designed siRNAs to >35,000 human, mouse, and rat targets using a proprietary siRNA design process. For more information on these highly effective siRNAs, please visit our [Silencer® Select siRNAs Information Page](#). To purchase Ambion [Silencer Select Pre-designed or Validated siRNAs](#), start by searching our [siRNA Database](#). Silencer Select Pre-designed and Validated siRNAs are **guaranteed** to silence and available exclusively from Ambion/Applied Biosystems.

For those researchers who prefer to design their own siRNAs, we continue to provide this siRNA design tool. To use this design program, paste your mRNA sequence into the window, choose your preferred end structure (3' TT or UU), and the program will scan your sequence for AA dinucleotides. A report is generated indicating the position of the AA dinucleotide, the 21 base target and the corresponding sense and antisense siRNA oligonucleotides.

G/C content is calculated and displayed because Ambion researchers have found that siRNAs with lower G/C content (30-50%) are more active than those with higher G/C content. If desired, you can choose to limit your siRNA choices by maximum G/C content.

Below each candidate target, you will find a link to perform a BLAST search on the sequence. BLAST settings are preset to the recommended default for short sequences and can be modified as you choose (for more information, see the [Blast tutorial](#)). You may elect to BLAST the entire genome, or perform a more restricted search against sequences from your target species. Choose siRNAs with fewer than 16-17 contiguous base pairs of homology to other genes in your target cells.

Below each target you will also find links that will send the target directly to one of our kit specific design tools. With these tools you can [design template oligonucleotides](#) for use with our [Silencer®](#) siRNA Construction Kit or [design inserts](#) for our [pSilencer™](#) siRNA expression vectors.

If you are ordering custom synthetic siRNAs, the chosen siRNA target sequences can be pasted directly into an online order form such as that found on the Ambion website at [www.ambion.com/catalog/siRNA\\_order.html](http://www.ambion.com/catalog/siRNA_order.html).

**1. Paste your mRNA sequence (5' to 3'):** (Please ensure that sequence contains no numbers.)

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**2. End my siRNAs with:**☐ TT ☐ UU**3. G/C content maximum (optional):**

All G/C Contents

**4. Sequence constraints to avoid:**

- ☐ 4 or more A's or T's in a row (recommended for vectors with pol III promoter)
- ☐ 4 or more G's or C's in a row (recommended for chemically synthesized siRNA)

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